EXPLORATION PROGRAM OUTLINE

As a part of the final agreement, it will be stipulated that all previous aeroradiometric survey, drilling and logging, mineral reports and all other available data be made avilable for Minerals Exploration Company's review within days after the signing of said agreement.

The approximate program is outlined below.

Phase I (0-1 Month)

1) Review available data
2) Solicit drilling bids
3) Establish field office
4) Begin ground control survey
5) Hireoffice and field personnel
6) Color air photo coverage

Phase II (1-2 Month)

1) Compile reports on available data
2) Select drilling contractor
3) Stake initial drill holes
4) Prepare roads and drill pads
5) Equip office and orient personnel
6) Fly air mag and radiometric survey
7) Begin field reconnaissance
8) General environmental assessment report

Phase III (3-10 Month)

1) Exploratory drilling
2) Interpret data from air mag and air rad survey
3) Surface mapping and continuing field reconnaissance
4) General geochemical investigation

EXPLORATION PROGRAM OUTLINE (con't)

Phase III (con't)

5) Base, industrial, coal and related mineral survey

6) Overlapping drilling data interpretation

7) Piezometric surface contouring

8) Continued survey and site preparation work

Phase IV (11-12 Month)

1) Compile all field data and review

2) Prepare a "first year" exploration report

3) Delineate areas of significant interest

4) Layout of second year drilling program

Phase V (13-21 Month)

1) Exploratory drilling

2) Detailed geochemical investigation

3) Detailed surface mapping

4) General mineral survey and transportation and market analysis

5) Drill data interpretation

6) Begin drill site restoration

Phase VI (22-24 Month)

1) Complete exploration review

2) Prepare final geologic report

3) Complete restoration work

4) Analyze mineral potential

5) Define areas of mineral lease

It is anticipated that if any significant "find" is discovered during the course of the exploration program, the orderly assessment and development of the orebody would commence before the end of the two year exploration period. The

EXPLORATION PROGRAM OUTLINE (con't)

development program would be separate from, and in addition to, the exploration program as previously outlined.

GEOTHERMAL EXPLORATION PROGRAM OUTLINE

A survey of the geothermal power potential of the Laguna Reservation shall be phased in conjunction with the exploration program for other minerals, as follows:

Phase I (0-1 Month)

1) Review geological literature chemical analyses of warm wells

2) Measure temperature of available water wells and sample any abnormal wells.

Phase II (1-2 Month)

1) Begin field reconnaissance with emphasis on indications of recent volcanic activity, unusual mineralization, age and composition of rocks.

2) Log available wells showing abnormal temperature indications.

Phase III (3-10 Month)

1) Measure and record flowline temperatures at least every 100 feet of depth on exploratory holes drilled for mineral and hydrological survey at a density of at least one every eight square miles.

2) Run tubing and obtain stabilized temperature survey of any holes showing unusual flowline readings.

3) Complete field reconnaissance.

Phase IV (11-12 Month)

1) Compile all field data and review.

2) Delineate areas of significant interest.

Phase V (13-21 Month)

1) Continue observations of bore hole temperatures.

2) Confirm areas of interest.

Phase VI (22-24 Month)

1) Prepare report of geothermal potential.

2) Define areas for geothermal lease.

Geothermal leases, orderly assessment, and development of any significant geothermal discovery may commence before the end of the two year exploration period, in addition to the outlined exploration program. Such assessment may include drilling of additional holes, measurement of producing capabilities of any available holes, and detailed analysis of the characteristics of produced fluids.

LAGUNA PUEBLO EXPLORATION PROJECT

COST ANALYSIS

Development Drilling - 18 month drilling - 6 months evaluation

Section &/or Area	Area-Mi^2	Hole Density	Holes	Ave. Depth	Footage
1) South Reservation (Chinle)	145	1 hole/8 mi^2	18	1000'	18,000'
2) Sedillo Grant (Morrison)	134	1 hole/4 mi^2	34	1200'	40,800'
3) Jurassic Rocks Undivided	150	3 holes/mi^2	450	150'	67,500'
4) Morrison	212	5 holes/mi^2	1060	990'	1,049,400'
	641		1562		1,175,700'

1,175,700' x $2.50/ft = $2,940,000

Requirements

1,175,700 ÷ 2 = 587,850'/yr

Drilling rate - 800'/day x 5 dpw = 3,000'/wk x (9 mon. (.75) x 52 wk/yr x 80% efficiency=) 31 wks/yr = 124,000ft/rig/yr

587,850'/yr ÷124,000 ft/rig/yr = 5 rigs/year

Ancillery Services

2 Track Dozers - $80 ea/hr x 8 hrs/day x 5 days/wk = $6,400/wk

1 Motorgrader - $50/hr x 8hrs/day x 5 days/wk = $2,000/wk

2 Backhoes - $30 ea/hr x 8 hrs/day x 5 days/wk = $2,400/wk

2 Survey Crews - $35 ea/hr x 8 hrs/day x 5 day/wk = $2,800/wk

$13,600/wk

18 months x 4.33 wks/month x 80% efficiency = 62 wks x $13,600/wk = $843,200

Air Rad-Mag Survey 641 mi^2 - flight ht. @ 300' - line spacing @ 600'

641 mi^2 = 5634 line miles x $15/line mile =		84,510
Contingency @ 10% =		8,450
		$92,960
General Geological Reconnaissance & Mineral Evaluation		
(Consultants Fees)		$100,000
Color Aerial Photography		$25,000
Surface Mapping		$30,000
Geochemical Study		
1st Year - Stream sediment sampling (1 sample/mi^2)		$8,400
Water sampling (50 wells)		$1,250
	Sub Total	$9,650
2nd Year - 90 mi^2 target - stream sediment		$5,900
15 mi^2 target - rock, plant &/or soil		$5,300
	Sub Total	$11,200
	Total	$20,850
Field Equipment		
5 Vehicles @ $7,000 ea.		
2 Probe Trucks @ $12,000 ea.		
Misc Gear @ $2,000		$61,000
TOTAL EXPLORATION COMMITTMENT		$4,113,010

LAGUNA PUEBLO EXPLORATION PROJECT

Manpower Scheulde

Drilling

1 Geologist + 1 Helper / 2.5 Rigs =	2 Geologist 2 Field Assistants
Field Mapping	2 Geologist 2 Field Assistants

Requirements - Staff

1 Senior Project Geologist

4 Geologists

4 Geological Helpers

1 Office Manager - Accountant

1 Stenographer

2 Draftsmen

2 Geophysical Technicians

15

Consultants

1 Industrial Minerals

1 Hydrological

2 Total 17

In addition to the above requirements, various people within Union Oil and Minerals Exploration Company will be called upon to lend their specific expertise. The most probable needs would rise in the areas of base metals and coal exploration, geothermal, transportation and market assessment. Laguna personnel will be used wherever possible to fill these manpower requirements.

GEOCHEMICAL EXPLORATION PROGRAM OUTLINE

Geochemical exploration over the proposed 640 square miles of area on the Laguna Reservation has several advantages. With geochemical sampling, not only uranium favorable areas would be located but sandstone copper and other base metal potential could also be detected. In addition, deeper target areas not responsive to airborne or ground radiometrics could be located using pathfinder elements which would not necessarily be the metals for which we would be hoping to locate in mineable amounts. An outline of a reconnaissance survey is presented below.

Stream sediment sampling of the 640 square mile area in question should provide an accurate assessment of and delineate any potentially mineralized areas. Sampling will be done at a spacing of one stream sediment sample per square mile. Elements to be analyzed include Cu, Mo, U, Pb, Zn, Co and As.

In addition to the stream sediment sampling water well samples will also be completed. Two 500 ml. water samples will be collected at each site. One sample will be filtered and acidified with nitric acid. Samples will be collected in pretreated polyethylene bottles. The acidified sample will be analyzed for U_3O_8, V_2O_5, Cu, Mo and Se. The other sample will be analyzed for SO_4, CO_3, HCO_3 and pH.

Upon completion of the reconnaissance stream sediment-water well survey, one can expect that a certain percentage of the total area will exhibit some favorable response to the initial survey and will warrant further investigation. The additional work should consist of both more intense geochemical methods and other techniques in the program up to this point.

To further delineate and locate prospect areas more intense geochemical surveying would be done. Stream sediment sampling will be intensified to the point where all major drainages and their tributaries would be sampled. Five samples per square mile should be adequate. In addition, selected areas could be sampled by taking rock chips, soils or plant samples on a widely spaced grid. On a 1000 foot grid this would mean approximately 25 samples per square mile.

Upon completion of the second phase of the geochemical program additional drilling sites would be located.

AERIAL SURVEYS

The entire Laguna Reservation will be provided with aeroradiometric survey coverage. The purpose of the survey will be to delineate "anomalous" areas that are at or near the surface. The information will serve as a control and guide for the reconnaissance work being carried on by the field parties.

Coverage would be at flight heights of either 300 feet or 400 feet. The 300 foot height would provide better resolution, if the contractor would be willing to fly at that heigth. All flying will be done with a fixed wing aircraft. The effective cone of information dictates an 800 foot line separation for the 400 foot flight height and a 600 foot line separation for the 300 foot flying height to get 100% ground coverage. Supplemental flying may be necessary in areas of extreme topography such as mesas and canyons.

To augment the exploration for base metals, aeromagnetic coverage will also be provided in conjunction with the radiometric survey.

The entire aerial survey will require a total of three months; one month for flying and two months for data interpretation.

ENVIRONMENTAL ASSESSMENT REPORT - Laguna Requirements (B.I.A.)

1. Description and purpose of project
2. Description of environment
3. Environmental impact of the proposed project
4. Mitigating measures
5. Unavoidable adverse effects
6. Relationship between local short-term uses; long-term productivity
7. Irreversible or irretrievable commitments of resources
8. Alternative to the proposed action
9. Conclusion

GCD:mn
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